

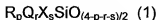
## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Presented) A laser engravable printing substrate comprising a photo-cured pattern-free product of a photosensitive resin composition, wherein the photosensitive resin composition comprises a resin (a) having a polymerizable unsaturated group having a number average molecular weight of 1000 or more and 200000 or less, an organic compound (b) having a polymerizable unsaturated group having a number average molecular weight of less than 1000, and an organic silicon compound (c) having at least one Si-O bond in a molecule and having no polymerizable unsaturated group in the molecule, wherein a content of the organic silicon compound (c) is 0.1 wt% or more and 10 wt% or less based on the total amount of the photosensitive resin composition.

2. (Previously Presented) The laser engravable printing substrate according to claim 1, wherein the organic silicon compound (c) has a number average molecular weight of 100 or more and 100000 or less, and is liquid at 20°C.

3. (Previously Presented) The laser engravable printing substrate according to claim 1, wherein the organic silicon compound (c) comprises a silicone compound represented by the average composition formula (1):



wherein R represents one or more hydrocarbon groups selected from the group consisting of a linear or branched alkyl group(s) having 1 to 30 carbon atoms, a cycloalkyl group(s) having 5 to 20 carbon atoms, an alkoxy group(s) having 1 to 20

carbon atoms, an alkyl group(s) substituted with an aryl group and having 1 to 30 carbon atoms (the number of carbon atoms before the alkyl group is substituted), an aryl group(s) substituted with a halogen atom and having 6 to 20 carbon atoms, an alkoxycarbonyl group(s) having 2 to 30 carbon atoms, a monovalent group(s) containing a carboxyl group or a salt thereof, a monovalent group(s) containing a sulfo group or a salt thereof, and a polyoxyalkylene group(s),

Q and X each represent one or more hydrocarbon groups selected from the group consisting of a hydrogen atom, a linear or branched alkyl group(s) having 1 to 30 carbon atoms, a cycloalkyl group(s) having 5 to 20 carbon atoms, an alkoxy group(s) having 1 to 20 carbon atoms, an alkyl group(s) substituted with an aryl group and having 1 to 30 carbon atoms (the number of carbon atoms before the alkyl group is substituted), an aryl group(s) substituted with a halogen atom and having 6 to 20 carbon atoms, an alkoxycarbonyl group(s) having 2 to 30 carbon atoms, a monovalent group(s) containing a carboxyl group or a salt thereof, a monovalent group(s) containing a sulfo group or a salt thereof, and a polyoxyalkylene group(s), and

p, r and s are numbers satisfying the formulas:

$$0 < p < 4,$$

$$0 \leq r < 4,$$

$$0 \leq s < 4, \text{ and}$$

$$(p + r + s) < 4.$$

4. (Currently Amended) The laser engravable printing substrate according to claim 3, wherein the silicone compound comprises a compound having at least one organic group selected from the group consisting of an aryl group, a linear or branched

alkyl group substituted with at least one aryl group, an alkoxycarbonyl group, an alkoxy group and a polyoxyalkylene group, ~~and having a hydrogen atom ( $\alpha$  position hydrogen) bonded to a carbon atom to which the organic group is directly bonded.~~

5. (Previously Presented) The laser engravable printing substrate according to claim 4, wherein the silicone compound has at least one organic group selected from the group consisting of a methylstyryl group, a styryl group and a carbinol group.

6. (Previously Presented) The laser engravable printing substrate according to claim 1, wherein the organic silicon compound (c) comprises a compound having at least one organic group selected from the group consisting of an aryl group, a linear or branched alkyl group substituted with at least one aryl group, an alkoxycarbonyl group, an alkoxy group and a polyoxyalkylene group, and having a hydrogen atom ( $\alpha$  position hydrogen) bonded to a carbon atom to which the organic group is directly bonded.

7. (Previously Presented) The laser engravable printing substrate according to claim 1, wherein the photosensitive resin composition further comprises a photopolymerization initiator, wherein the photopolymerization initiator comprises at least one hydrogen extraction photopolymerization initiator (d).

8. (Previously Presented) The laser engravable printing substrate according to claim 7, wherein the photopolymerization initiator comprises at least one hydrogen extraction photopolymerization initiator (d) and at least one degradable photopolymerization initiator (e).

9. (Previously Presented) The laser engravable printing substrate according to claim 8, wherein the hydrogen extraction photopolymerization initiator (d) comprises at least one compound selected from the group consisting of benzophenones,

xanthenes and anthraquinones, and the degradable photopolymerization initiator (e) comprises at least one compound selected from the group consisting of benzoin alkyl ethers, 2,2-dialkoxy-2-phenylacetophenones, acyloxime esters, azo compounds, organic sulfur compounds and diketones.

10. (Previously Presented) The laser engravable printing substrate according to claim 7 or 8, wherein the photopolymerization initiator comprises a compound having both of a site functioning as the hydrogen extraction photopolymerization initiator and a site functioning as the degradable photopolymerization initiator in the same molecule.

11. (Previously Presented) The laser engravable printing substrate according to claim 1, wherein the resin (a) is liquid at 20°C, and the resin (a) and/or the organic compound (b) are compounds having a molecular chain having at least one bond selected from a carbonate bond, an ester bond and an ether bond, and/or having at least one molecular chain selected from the group consisting of an aliphatic saturated hydrocarbon chain and an aliphatic unsaturated hydrocarbon chain, and having an urethane bond.

12. (Previously Presented) The laser engravable printing substrate according to claim 1, wherein a haze of the photosensitive resin composition is 0% or more and 70% or less when it is in the form of a layer having a thickness of 1 mm.

13. (Previously Presented) The laser engravable printing substrate according to claim 1, wherein the photosensitive resin composition is liquid at 20°C.

14. (Previously Presented) The laser engravable printing substrate according to claim 1, wherein the printing substrate comprises an organic silicon compound in an interior and/or on a surface thereof, and Si atoms originating from the organic silicon

compound is contained in an abundance ratio of 0.01 wt% or more and 10 wt% or less by detection and quantitative determination using solid  $^{29}\text{Si}$ NMR which is solid nuclear resonance spectrometry in which an observed nucleus is Si having an atomic weight of 29, and plasma emission spectrometry in combination.

15. (Previously Presented) A laser engravable printing substrate, comprising a pattern-free crosslinked and photo-cured photosensitive resin composition molded into a sheet or cylinder, wherein the photosensitive resin composition comprises a resin (a) having a polymerizable unsaturated group having a number average molecular weight of 1000 or more and 200000 or less, an organic compound (b) having a polymerizable unsaturated group having a number average molecular weight of less than 1000, and an organic silicon compound (c) having at least one Si-O bond in a molecule and having no polymerizable unsaturated group in the molecule, wherein a content of the organic silicon compound (c) is 0.1 wt% or more and 10 wt% or less based on the total amount of the photosensitive resin composition.

16. (Previously Presented) The laser engravable printing substrate according to claim 14 or 15, having a surface of the pattern-free crosslinked and photo-cured photosensitive resin composition subjected to at least one processing selected from the group consisting of cutting processing, grinding processing, polishing processing and blast processing.

17. (Original) The laser engravable printing substrate according to claim 16, wherein an elastomer layer is formed by curing the photosensitive resin composition that is liquid at normal temperature.

18. (Previously Presented) The laser engravable printing substrate according to claim 16, wherein an outermost surface layer is a layer engravable by a near infrared laser.

19. (Previously Presented) A laser engravable printing substrate comprising a pattern-free photocured photosensitive resin composition, wherein the laser engravable printing substrate has a surface with a wettability characteristic such that when 20  $\mu$ l of an indicating liquid with a surface energy of 30 mN collected using a quantitative and fixed type micropipette is added dropwise onto the surface and a maximum diameter of an area where the droplet spreads is measured after 30 seconds, the diameter of the droplet is 4 mm or more and 20 mm or less.

20. (Previously Presented) The laser engravable printing substrate according to any one of claims 14, 15, or 19, which is a flexographic printing original plate or a letterpress printing original plate or a screen printing original plate on which patterns are formed using a laser engraving process, or an ink amount adjusting roll which is used in contact with an ink transferring blanket or an anilox roll on which no patterns are formed.

21. (Previously Presented) A method of producing a laser engravable printing substrate comprising photo-curing a photosensitive resin composition by exposing the entire surface of the composition to light, wherein the photosensitive resin composition comprises a resin (a) having a polymerizable unsaturated group having a number average molecular weight of 1000 or more and 200000 or less, an organic compound (b) having a polymerizable unsaturated group having a number average molecular weight of less than 1000, and an organic silicon compound (c) having at least one Si-O

bond in a molecule and having no polymerizable unsaturated group in the molecule, wherein a content of the organic silicon compound (c) is 0.1 wt% or more and 10 wt% or less based on the total amount of the photosensitive resin composition.